

ers, set-top boxes, home automation control panels, security control panels, TV boxes (e.g., Samsung HomeSync™, Apple TV™, or Google TV™), game consoles (e.g., Xbox™ and PlayStation™), electronic dictionaries, electronic keys, camcorders, or electronic picture frames.

[0035] The electronic devices may include at least one of various medical devices (e.g., various portable medical measurement devices (such as blood glucose meters, heart rate monitors, blood pressure monitors, or thermometers, and the like), a magnetic resonance angiography (MRA) device, a magnetic resonance imaging (MRI) device, a computed tomography (CT) device, scanners, or ultrasonic devices, and the like), navigation devices, global positioning system (GPS) receivers, event data recorders (EDRs), flight data recorders (FDRs), vehicle infotainment devices, electronic equipment for vessels (e.g., navigation systems, gyrocompasses, and the like), avionics, security devices, head units for vehicles, industrial or home robots, automatic teller machines (ATMs), points of sales (POSs) devices, or Internet of Things (IoT) devices (e.g., light bulbs, various sensors, electric or gas meters, sprinkler devices, fire alarms, thermostats, street lamps, toasters, exercise equipment, hot water tanks, heaters, boilers, and the like).

[0036] The electronic devices may further include at least one of parts of furniture or buildings/structures, electronic boards, electronic signature receiving devices, projectors, or various measuring instruments (such as water meters, electricity meters, gas meters, or wave meters, and the like). The electronic devices may be one or more combinations of the above-mentioned devices. The electronic devices may be flexible electronic devices. Also, the electronic devices are not limited to the above-mentioned devices, and may include new electronic devices according to the development of new technologies.

[0037] Hereinafter, the electronic devices according to various embodiments of the present disclosure will be described with reference to the accompanying drawings. The term “user” as used herein may refer to a person who uses an electronic device or may refer to a device (e.g., an artificial intelligence electronic device) which uses an electronic device.

[0038] FIG. 1 is a diagram illustrating a configuration of an electronic device, according to an embodiment of the present disclosure.

[0039] Referring to FIG. 1, an electronic device 100 includes a cover glass 110, a touch panel 120, a pressure sensor 130, and a display panel 140. The electronic device 100 may include a display module that includes the cover glass 110, the touch panel 120, the pressure sensor 130, and the display panel 140. For example, the touch panel 120 or the pressure sensor 130 may correspond to a part of the components of the display module. The touch panel 120 or the pressure sensor 130 may be embedded in the display module; the touch panel 120 may be referred to as a “first sensor”, and a pressure sensor may be referred to as a “second sensor”.

[0040] The first sensor or the second sensor may be any suitable type of sensors. For example, the first sensor or the second sensor may include a proximity sensor (e.g., a proximity sensor 1040G of FIG. 10) or an illuminance sensor (e.g., an illuminance sensor 1040K of FIG. 10).

[0041] The electronic device 100 may sense, for example, a touch input (e.g., a user input) through the touch panel 120. In the case where a conductor such as a user's finger, a

stylus, or the like makes contact with the cover glass 110 or is adjacent to the cover glass 110, the electronic device 100 may recognize the touch input if the amount of charge is varied in the touch panel 120. In the case where the conductor makes contact with the cover glass 110, a pressure may be applied on the cover glass 110 by the touch input. The electronic device 100 may recognize the pressure applied on the cover glass 110 by the touch input by using the pressure sensor 130. In the case where the pressure sensor 130 senses the pressure, the electronic device 100 may process the touch input of the touch panel 120 as a valid input. The electronic device 100 may perform a function corresponding to the valid touch input.

[0042] In the case where a conductive foreign substance such as a water or the like exists on the cover glass 110 or in the case where a noise, which passes through the touch panel 120, such as an external electromagnetic wave is generated, the electronic device 100 may sense a touch input (e.g., a ghost touch) if there is a variation of the amount of charge in the touch panel 120. Since the above-mentioned touch input is not an intended input, the touch input by the conductive foreign substance or the noise may be disregarded. The touch input by the conductive foreign substance or the noise may not apply a pressure on the cover glass 110. Therefore, in the case where the pressure is not sensed through the pressure sensor 130 even though the touch input is sensed through the touch panel 120, the electronic device 100 may process the corresponding touch input as an invalid input. In the case where it is determined that the touch input is an invalid input, the electronic device 100 may recognize the touch input as the ghost touch and may not process the touch input. For example, the electronic device 100 may disregard (or remove) the invalid touch input. In the case where the touch input is disregarded, the electronic device 100 may not perform any operation for the invalid touch input.

[0043] While the pressure sensor 130 is illustrated in FIG. 1 as being arranged under the touch panel 120, the present disclosure is not limited thereto. For example, the pressure sensor 130 may be arranged on or over the touch panel 120 or in the touch panel 120.

[0044] FIG. 2 is a block diagram illustrating a configuration of an electronic device, according to an embodiment of the present disclosure.

[0045] Referring to FIG. 2, an electronic device 200 includes, for example, a touch module 210, a processor 240, and a display 250.

[0046] For example, the touch module 210 may include a touch panel 211, a pressure sensor 212, and a control circuit 213.

[0047] The touch panel 211 (e.g., the first sensor) may be a capacitive touch panel and may sense, for example, a touch input. The touch panel 211 may sense the touch input through a variation of the amount of charge passing through an electrode of the touch panel 211. For example, in the case where a conductor, such as a user's finger, a stylus, or the like, makes contact with a cover glass of the electronic device 200, the touch panel 211 may sense a touch input. As another example, in the case where a conductive foreign substance, such as water or the like, makes contact with the cover glass of the electronic device 200, or in the case where a noise, such as an external electromagnetic wave or the like, passes through the touch panel 211, the touch panel 211 may sense a touch input.